

EXAMINATION OF WESTCHESTER CREEK, NEW YORK.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF OF ENGINEERS, REPORTS OF
EXAMINATION OF WESTCHESTER CREEK, NEW YORK.

DECEMBER 8, 1899.—Referred to the Committee on Rivers and Harbors and ordered
to be printed.

WAR DEPARTMENT,
Washington, December 6, 1899.

SIR: I have the honor to transmit herewith a letter from the Chief of Engineers, United States Army, dated December 4, 1899, together with copies of reports from Lieut. Col. W. H. H. Benyaurd, Corps of Engineers, dated, respectively, September 15, 1899, and November 28, 1899, the former of a preliminary examination and the latter of a survey of Westchester Creek, New York, made by him in compliance with the provisions of the river and harbor act of March 3, 1899.

Very respectfully,

ELIHU ROOT,
Secretary of War.

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

OFFICE OF THE CHIEF OF ENGINEERS,
UNITED STATES ARMY,
Washington, December 4, 1899.

SIR: I have the honor to submit the accompanying copy of reports of September 15, 1899, and November 28, 1899, with map, by Lieut. Col. W. H. H. Benyaurd, Corps of Engineers, on preliminary examination and survey, respectively, of Westchester Creek, New York, made in pursuance of requirements of the river and harbor act of March 3, 1899.

WESTCHESTER CREEK, NEW YORK.

Lieutenant-Colonel Benyaud considers the locality to be worthy of improvement by the General Government, and presents a plan for dredging a channel in the creek from East River to the head of navigation at Westchester 8 feet in depth at mean low water, 100 feet wide across the estuary, thence 80 feet wide to a point about 1,000 feet above Scriven's Dock, and thence 60 feet wide to the head of navigation, estimated to cost, including contingencies, \$42,780, and \$2,000 annually for maintenance.

Very respectfully, your obedient servant,

JOHN M. WILSON,
Brig. Gen., Chief of Engineers,
U. S. Army.

Hon. ELIHU ROOT,
Secretary of War.

PRELIMINARY EXAMINATION OF WESTCHESTER CREEK, NEW YORK.

ENGINEER OFFICE, UNITED STATES ARMY,
New York, N. Y., September 15, 1899.

GENERAL: I have the honor to submit the following report upon a preliminary examination of Westchester Creek, New York, made pursuant to the requirements of the river and harbor act of March 3, 1899:

The navigable part of Westchester Creek, which is a tidal stream, extends $2\frac{1}{2}$ miles from the town of Westchester to its outlet in the East River, between Clauson Point and Old Ferry Point, about $2\frac{1}{2}$ miles west of Throgs Neck. At Westchester, navigation is obstructed by a low, solid bridge, or causeway, which has no draw.

At Unionport, about 1 mile below Westchester, the creek is crossed by an iron drawbridge, which has ample draw openings for the passage of vessels.

The creek is now navigable at low tide for vessels drawing about 4 feet. The mean range of tides is about 7 feet.

The course of the creek is quite regular, the width between the banks increasing from about 110 feet at the head of navigation to 500 feet at the entrance to the estuary at the mouth, a distance of 1.7 miles.

Across the estuary, which is about a mile in length, the width increases from 500 feet at the mouth of the creek to about half a mile between the points of land at East River, which define the entrance to the estuary.

At East River the entrance is obstructed by a bar 1,200 feet in length, upon which the depth is but 4 feet; thence to Unionport, the depth is about $6\frac{1}{2}$ feet; thence to the head of navigation, the depth is from $3\frac{1}{2}$ to 4 feet at mean low water. The improvement desired is the enlargement of the channel necessary to make it 100 feet wide across the bar at the mouth; thence to the head of navigation 60 to 80 feet wide and 8 feet deep at mean low water, so that vessels may be enabled to navigate the creek at all stages of tide, whereas at the present time a large part of the commerce is limited to high tide, thus causing great delay and inconvenience to the rapidly increasing traffic in this avenue of commerce to the northeastern part of New York City.

In accordance with the terms of the river and harbor act of September 19, 1890, a preliminary examination and survey of Westchester Creek were made, and they are printed in the Annual Report of the Chief of Engineers for 1891, Part I, page 954. At that time the improvement desired was the same as at present, and the commerce was then reported to be 50,000 tons in 1890, with a valuation of \$242,000, and the number of vessels employed 300. It is now represented that these amounts have been greatly increased since that time. Statistics have been promised and will be forwarded when received.

Harbor lines were established in the estuary as a part of the East River system in 1891, and in the creek they were established and approved by the Secretary of War June 29, 1894.

The depths in the creek have not changed in any essential respect since the survey of 1891, and the map made at that time is complete and will answer for present purposes, no survey being now necessary.

In my opinion Westchester Creek from East River to Westchester is worthy of improvement by the General Government.

Very respectfully, your obedient servant,

W. H. H. BENYAURD,
Lieut. Col., Corps of Engineers.

Brig. Gen. JOHN M. WILSON,
Chief of Engineers, U. S. A.

[First indorsement.]

OFFICE CHIEF OF ENGINEERS,
U. S. ARMY,
September 20, 1899.

Respectfully submitted to the Secretary of War.

This is a report upon preliminary examination made of Westchester Creek, New York, under the provisions of the river and harbor act of March 3, 1899.

Lieutenant-Colonel Benyaurd is of opinion, concurred in by me, that this creek is worthy of improvement from East River to Westchester.

A survey in the ordinary sense is not required, and I recommend that I be authorized to direct the local officer to submit a plan and estimate of cost of the proposed improvement, the preparation of which can be effected without cost to the Government.

JOHN M. WILSON.
*Brig. Gen., Chief of Engineers,
U. S. Army.*

[Second indorsement.]

WAR DEPARTMENT,
September 23, 1899.

Approved as recommended by the Chief of Engineers.

By order of the Secretary of War:

A. N. THOMPSON,
Acting Chief Clerk.

Commercial statistics in part of Westchester Creek for twelve months ending September 23, 1899.

[Furnished by Mr. A. J. Howell.]

Articles.	Quantity. ¹	Value.
Coal	tons, 25,700	\$128,500
Brick	5,000,000	30,000
Lumber	feet, 5,000,000	35,000
Stone	tons, 35,000	35,000
Sand	do, 12,400	9,300
Cement	barrels, 4,000	4,000
Lime	5,000	4,000
Shingles	bundles, 1,000,000	8,000
Fence posts	2,000	300
Soda ash	tons, 1,400	10,300
Bicarbonate of soda	do, 1,500	105,000
Ashes	do, 2,000	1,200
Gravel	do, 1,500	1,800
Laths	1,000,000	5,000
Total		367,300

	Number.	Draft.
Sea schooners	7	11
Canal boats	104	7
Scows	55	10
Lighters	33	5

¹ Many of above aggregates are for last six months only.

A new plant is now building at head of creek with coal pocket capacity of 2,000 tons.

Respectfully,

A. J. HOWELL.

91 WALL STREET,

New York, N. Y., September 23, 1899.

PLAN AND ESTIMATE OF COST OF IMPROVING WESTCHESTER CREEK, NEW YORK.

ENGINEER OFFICE, UNITED STATES ARMY,

New York, N. Y., November 28, 1899.

GENERAL: In compliance with Department letter of September 29, 1899, in regard to survey of Westchester Creek, New York, I have the honor to submit the following report, with plan and estimate, prepared to comply with the terms of the river and harbor act approved March 3, 1899:

Inasmuch as a complete instrumental survey of Westchester Creek was made in 1890, the map of which was submitted to the Chief of Engineers by Col. G. L. Gillespie, Corps of Engineers, on September 8, 1891, with a report upon the survey, and as this map was revised in 1894 to show location of harbor lines, approved by the Secretary of War June 29, 1894, and as inquiry of parties using the channel developed the fact that the natural depths in the creek have remained nearly permanent since the last survey, no field work was considered necessary in connection with this report. The estimates of 1891 have been revised to correspond with present conditions and prices. Since 1890 there has been a slight advance in general prices for dredging, and the dumping ground for that locality has been removed about 18 miles to the eastward.

The natural condition of Westchester Creek, as shown by the map accompanying this report, is as follows: The total length of the navigable part of the river, including the estuary, is $2\frac{3}{4}$ miles; the distance across the estuary is three-fourths of a mile.

From East River to Scriven's Dock, a distance of 4,000 feet, the low-water depth is from 9 to 10 feet, except across the bar at the mouth of the estuary, 1,300 feet in length, where the depth is about 4 feet. From Scriven's Dock to the Eastern Boulevard Bridge at Unionport, a distance of 5,000 feet, the depth is about $6\frac{1}{2}$ feet; thence to the head of navigation, a distance of 5,000 feet, the creek is navigable at low water for vessels drawing about $3\frac{1}{2}$ feet. The navigable channel, with depths as above stated, has varying widths of from 20 to 80 feet. The mean range of tides is 7.1 feet.

The navigable part of the creek ends at Main street, Westchester, at which point there is a low, solid bridge or causeway, which has no draw. At the Eastern Boulevard crossing, at Unionport, there is a drawbridge, properly located in relation to the channel, which has draw openings of 50 feet in width. It is thought that no permanent works will be required to confine the channel in the cut proposed across the bar, as the long pool in the estuary retains its natural depth, which would seem to indicate that an excavated channel of the proposed depth could be maintained with occasional dredging. A small estimate for maintenance is therefore submitted, which it is proposed to apply to this and other parts of the improvement recommended.

The material in the bed of the creek is mud and sand, and that across the bar at the mouth of the estuary is sand. No rock is known to exist within the limits of the proposed channel.

No improvement of this creek has been made by the General Government. Its improvement was recommended in the report of 1891, above referred to.

A comparison of the statistics of 1890 with those recently furnished shows a considerable increase in the tonnage and value of the commerce and in the draft of vessels.

Table of comparative statistics.

FOR FISCAL YEAR ENDING JUNE 30, 1890.

[Draft of vessels, 5 to 8 feet.]

Articles.	Amount.	Value.
Coal.....tons..	8,000	\$35,000
Brick.....	5,000,000	20,000
Lumber.....feet..	4,000,000	20,000
Stone.....tons..	10,000	10,000
Sand.....do....	15,000	9,000
Cement.....barrels..	5,000	5,000
Lime.....do....	10,000	5,000
Shingles.....bundles..	145,000	10,000
Locust posts.....	6,000	6,000
Soda ash.....tons..	1,400	42,000
Bicarbonate of soda.....do....	1,000	70,000
Total.....		242,000

*Table of comparative statistics—Continued.*FOR TWELVE MONTHS ENDING SEPTEMBER 23, 1899.¹

[Draft of vessels, 5 to 11 feet.]

Articles.	Amount.	Value.
Coal.....	25,700 tons..	\$128,500
Brick.....	5,000,000	30,000
Lumber.....	5,000,000 feet..	25,000
Stone.....	35,000 tons..	25,000
Sand.....	12,400 do.....	9,500
Cement.....	4,000 barrels..	4,000
Lime.....	5,000 do.....	4,000
Shingles.....	1,000,000 bundles..	8,000
Fence posts.....	2,000	300
Soda ash.....	1,400 tons..	10,200
Bicarbonate of soda.....	1,500 do.....	105,000
Ashes.....	2,000 do.....	1,200
Gravel.....	1,500 do.....	1,800
Laths.....	1,000,000	5,000
Total.....		\$67,200

¹ Many of above aggregates are for last six months only.

The cost of making a navigable channel in Westchester Creek from East River to the head of navigation at Westchester, 8 feet in depth at mean low water, 100 feet wide across the estuary; thence 80 feet wide to a point about 1,000 feet above Scriven's Dock; thence 60 feet wide to the head of navigation, is estimated as follows:

For dredging a channel 8 feet deep at mean low water and 100 feet wide across the estuary, 24,000 cubic yards, scow measurement, at 30 cents ..	\$7,200.00
For dredging a channel 8 feet deep at mean low water and 80 feet wide, from the estuary to a point about 1,000 feet above Scriven's Dock, 10,000 cubic yards, scow measurement, at 30 cents ..	3,000.00
For dredging a channel 8 feet deep at mean low water and 60 feet wide, from a point about 1,000 feet above Scriven's Dock to the head of navigation, 90,000 cubic yards, scow measurement, at 30 cents ..	27,000.00
Total (cubic yards, 124,000) ..	37,200.00
Contingencies, supervision, etc., 15 per cent.	5,580.00
	42,780.00
For annual maintenance ..	2,000.00

In view of the commercial interests involved, it is my opinion that Westchester Creek, New York, is worthy of improvement by the General Government on the plans and to the extent above set forth.

Very respectfully, your obedient servant,

W. H. H. BENYAURD,
Lieut. Col., Corps of Engineers.

Brig. Gen. JOHN M. WILSON,
Chief of Engineers, U. S. A.

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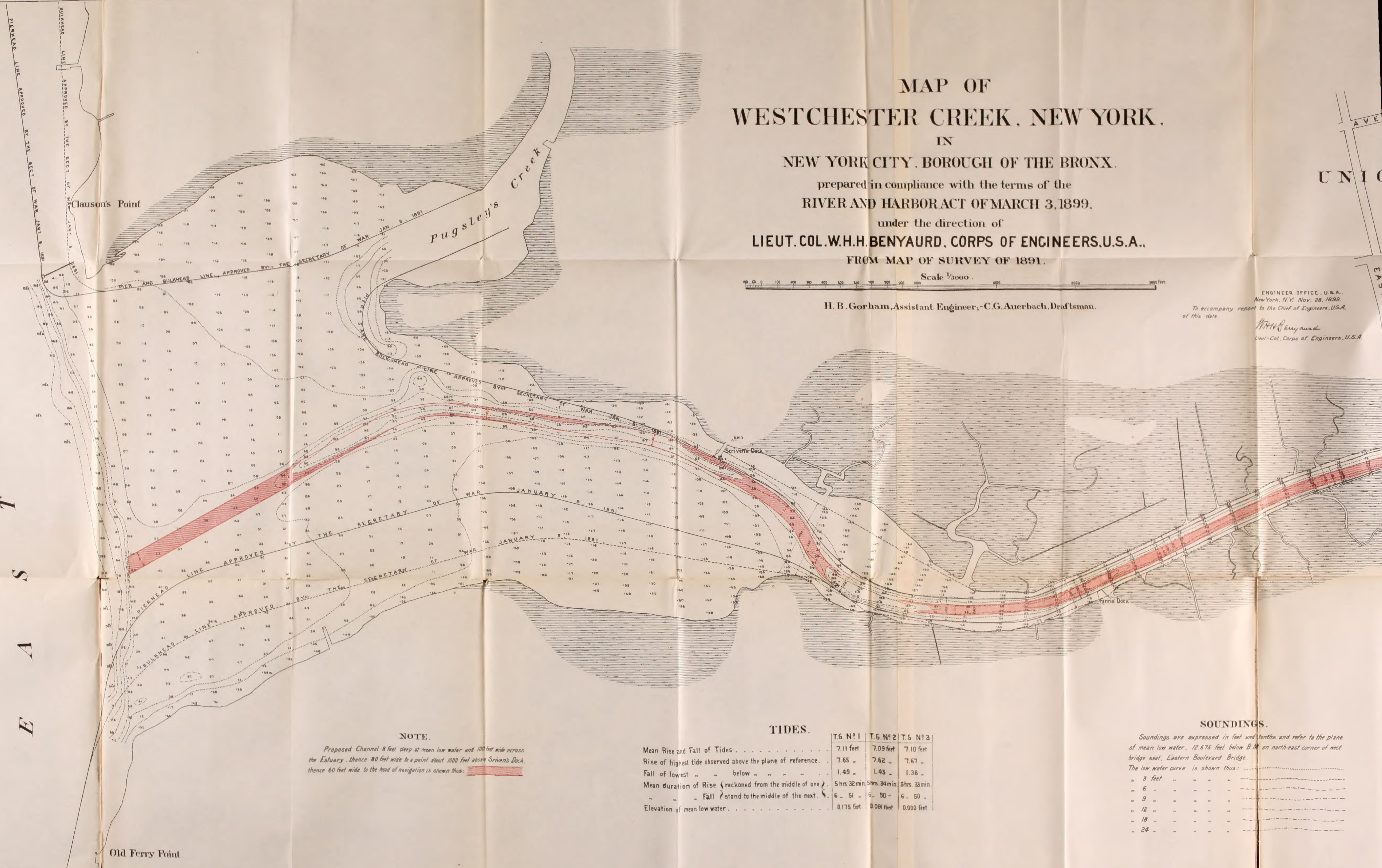
prepared in compliance with the terms of the
RIVER AND HARBOR ACT OF MARCH 3, 1899.

LIEUT. COL. W. H. H. BENYAURD, CORPS OF ENGINEERS, U.S.A.,

Scale $\frac{1}{3000}$.

ENGINEER OFFICE, U.S.A.,
New York, N.Y. Nov. 28, 1899.
To accompany report to the Chief of Engineers, U.S.A.,
of this date.

ENGINEER OFFICE, U.S.A.,
New York, N.Y., Nov. 28, 1899.
Report to the Chief of Engineers, U.S.A.,
W. H. S. Emory and
Lieut.-Col., Corps of Engineers, U.S.A.



Proposed Channel 8 feet deep at mean low water and 100 feet wide across the Estuary, thence 80 feet wide to a point about 1000 feet above Scriven's Dock, thence 60 feet wide to the head of navigation is shown thus:

Mean Rise and Fall of Tides	7.11 feet	7.09 feet	7.10 feet
Rise of highest tide observed above the plane of reference	7.65 "	7.62 "	7.67 "
Fall of lowest " " below " " " " " "	1.49 "	1.48 "	1.38 "
Mean duration of Rise { reckoned from the middle of one }.	5hrs 32min	5hrs. 34min.	5hrs. 33min.
" " Fall { stand to the middle of the next. }	6- 51 -	6- 50 -	6- 50 -
Elevation of mean low water	0.175 feet	0.081 foot	0.000 feet

Soundings are expressed in feet and tenths and refer to the plane of mean low water, 12.675 feet below B.M. on north-east corner of west bridge seat, Eastern Boulevard Bridge.

The low water curve is shown thus:

Distance (ft)	Low Water Curve (ft)
0	0
100	3
200	6
300	9
400	12
500	18
600	24
700	24
800	24
900	24
1000	24

J.S.A.,

2000 Feet

To accompany report to the Chief of Engineers, U.S.A.,
of this date.

WESTCHESTER

Soundings are expressed in feet and tenths and refer to the plane of mean low water, 12.675 feet below B.M. on north-east corner of west bridge seat, Eastern Boulevard Bridge.

The low water curve is shown thus:

The Harbor Lines approved by the Secretary of War, Jan'y 9, 1891, terminate on the west side of Estuary at Scriven's Dock; and on the east side at point "A." Above these points, the Pierhead and Bulkhead Lines, shown in full black and broken black lines, respectively, are those recommended by Col G. L. Gillespie, Corps of Engineers, U.S.A. and approved by the Secretary of War, June 29, 1894.

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